Pharmacists Face More Malpractice Suits

By R. FRASER KENT
Special Tribune Correspondent

MIAMI BEACH—Pharmacists face an increased danger of being sued for malpractice, members of the National Association of Retail Druggists (N.A.R.D.) were warned at their annual meeting here.

Not that this came as news. The risk is reflected in the insurance rates that have been rising steadily in the last three years, said Sidney Waller, N.A.R.D. general counsel.

Pharmacists are already becoming more cautious in filling prescriptions, he added, and this may affect the traditional doctor-druggist relationship.

For example, a pharmacist who questions the drug or dosage in a prescription may now refuse to accept a correction by phone. That means the patient would have to return to the doctor for a rewritten prescription, and would realize that an error had been made.

'Suit-Prone Society'

Mr. Waller said the increase stems, in part, from the publicity given to malpractice problems of the medical profession "in our suit-prone society."

But a greater risk is posed by the right that pharmacists have won in several states to substitute a generic drug for the one a physician has prescribed. Or, whenever a prescription is written generically, to select the brand of product to be used.

Mr. Waller's view was supported by Sidney H. Willig, Professor of Health Science Law at Temple University, in a film-strip presentation shown by Eli Lilly and Co. in the N.A.R.D. exhibit hall.

At a minimum, the new laws will increase the pharmacists' record keeping and documentation, Mr. Willig said. The druggist must be ready to show, in court, why he chose a particular generic product, whether he exhibited professional judgment and expertise in making the choice, and how he satisfied himself as to its equivalency.

As the "drug expert," he may now be challenged to prove he exercised all due care in the selection of a generic substitute, even if he was following the patient-purchaser's request for a given product.

The pharmacist could be sued for negligence if he chose a drug that was not safe or efficacious and the patient was harmed. So he can expect trouble if the substituted product doesn't function as the patient and prescriber had expected, Mr. Willig said.

A pharmacist could also be liable if he misrepresented the safety and efficacy of the substituted drug, he said. "If he sets forth something as a fact and someone relies on the conclusion he has announced, it could be regarded as reckless endangerment."

In short, Mr. Willig said, druggists must be more alert to legal considerations whenever they determine the brand to be dispensed and "from a scientific viewpoint, must prepare themselves to make choices in keeping with their new responsibility."

Mr. Waller said the N.A.R.D. has not yet monitored the number of law suits or legislative changes, state by state, because the danger of malpractice actions has been relatively slight until now.

Wrong Pill, Wrong Bottle

At present, a pharmacist may be sued for dispensing a product with incorrect instructions or dosage—"the wrong pill in the wrong bottle"—or one that has not been authorized.

In most cases, though, the pharmacist is now sued as part of the manufacturer-distribution "chain" when a drug-related problem goes to court.

The rationale, Mr. Willig explained, is that the pharmacist is "the last professional person between the manufacturer and the patient who can screen out an adulterated, misbranded or otherwise unfit product."

That includes "any drug product which is below strength or over strength, impure, insanitarily prepared or not up to label claims." There need be no proof, in such cases, that anyone was negligent.

However, if the patient can collect the total damages from the manufacturer, he cannot also collect from the pharmacist. On the other hand, if the manufacturer is absolved, the pharmacist would also be free of any liability.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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Combined Drugs Held Useful in Relief of Pain

Medical Tribune World Service

FLORENCE, ITALY—A combination of the thymoleptic chlorimipramine or imipramine with haloperidol, a neuroleptic, will produce relief in about 80 per cent of cases of chronic and severe pain caused by neurologic and rheumatic conditions, in traumatic pains of the locomotor system, and in pains caused by cancer, Dr. Ralph B. Kocher of the University Psychiatric and Neurological Clinic, Basel, Switzerland, reported to the First World Congress on Pain.

Over a period of several years, 103 patients have been treated at the clinic with a combination of psychotropic drugs for relief of pain. In most cases, they had been hospitalized for insupportable pain resistant to other therapy. Some of them had signs of drug addic-

Continued on page 12

Med Trib 43

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Advice to Pediatricians:

Secure Consent From Parents —And Children!

By FRANCES GOODNIGHT
Medical Tribune Staff

WASHINGTON, D.C.—A leading pediatrician-lawyer cautioned colleagues here to realize that the doctrine of informed consent has ramifications that can affect the practice of any physician who treats children.

Dr. Rowine H. Brown, medical director of Chicago's Cook County Hospital, said that a number of medical liability suits are being based on allegations of breach of this doctrine and warned that plaintiffs in some instances

Continued on page 12

making rounds at press time

"BRAIN DEATH" LAW - Prompted by the Karen Ann Quinlan case, State Sen. John Russo has introduced bill into N.J. legislature which would define death as a flat EEG for 24 hrs. or more. Measure would allow M.D.s and family in agreement to remove pt. from respirator if, "based on ordinary standards of medical practice," brain has ceased to function. Russo said bill would protect M.D.s from prosecution stemming from decision. N.J. does not now have a statutory definition of death.

First Known Report:

Transfer Factor Cures CMV Disease in Child

Drs. J. Kelly Smith (r.) and Jerry Hsieh beam at their lively young patient, the first child to recover fully from cytomegalovirus disease, following treatment with transfer factor. When therapy started, the youngster was 11 months old and had severe motor retardation and muscular wasting.

By NATHAN HORWITZ
Medical Tribune Staff

MANHASSET, N.Y.—The use of transfer factor to produce the first known cure of cytomegalovirus (CMV) in a young child was reported here by a New York immunologist.

The youngster, now two years seven months old, is entirely asymptomatic, free of disease, has regained her muscle mass and has almost completely recovered from severe motor retardation.

"Except for a very slight wide-paced gait, she appears to be normal in intelligence and in all other respects," said Dr. J. Kelly Smith, chief of immunology and infectious diseases at North Shore University Hospital here. "To the best of our knowledge this is the first successful treatment of CMV in a child by any modality."

Dr. Smith, who has been working with transfer factor (TF) for five years in trials of other diseases unresponsive to conventional therapy, said that his decision to try TF in the child stemmed from findings by himself and other investigators that the substance appears to be most effective in the management of intracellular infections.

Treatment of the child began when she was eleven months old and had already developed severe motor retardation and muscular wasting, had a rapidly developing hydrocephalus and constant diarrhea, rhinorrhea and anorexia, Dr. Smith told MEDICAL TRIBUNE. Following a shunt operation to relieve the hydrocephalus, the patient was placed on a course of transfer

Continued on page 12

Postop IPPB Cited as Useless, Possibly Even Deleterious

By HARRIET PAGE
Special Tribune Correspondent

SAN FRANCISCO—Studies indicating that intermittent positive pressure breathing (IPPB) may be not only useless but deleterious in postoperative patients were presented here to the American College of Surgeons by an Albany (N.Y.) Medical College researcher.

Dr. Bruce Browner said he found that IPPB decreased functional residual capacity in nine of 13 patients he studied, and in those in whom functional residual capacity was increased, arterial pO_2 was decreased. The pO_2 also fell in eight of the 10 patients who developed reduced functional residual capacity.

Thus, he told MEDICAL TRIBUNE, "even when lung volume increased in some of the patients, they were still developing hypoxia." And on the basis of his study, and earlier studies, he said he thinks that IPPB in postoperative patients "is not only of little benefit but potentially harmful.

"When this is added to the risk of introducing respiratory infection from

Continued on page 19

Criticism of Medicine: A Valid Media Role?

Taking issue with *New York Post* reporter Barbara Yuncker, who welcomes an "adversary relationship" with medicine, Dr. Katherine Sturgis (right) told symposium audience and panelists— (from left) Dr. Lawrence Altman, medical reporter for *The New York Times*; Ms. Yuncker, Dr. Lewis Thomas, and genetic Bentley Glass—that a complementary posture was more desirable.

By ANASTASIA TOUFEXIS
Medical Tribune Staff

ROCHESTER, N.Y.—"Do I detect a slight adversary tension between the media and scientific community?" asked Dr. Eugene B. Brody of the University of Maryland School of Medicine at a two-day symposium here on "Medicine and the Media: Ethical Problems in Biomedical Communications."

Indirectly responding to Dr. Brody, who is director of the Institute of Psychiatry and Human Behavior at the university, Dr. Lewis Thomas, president of Memorial Sloan-Kettering Cancer Center in New York, said: "Scientific journalists are, in their way, performing functions rather like those of the daily reviewers of individual performances and also, from time to time, the special role of the critic.

"We need science criticism," he continued, "and now that I've thought

Continued on page 14

Aggressive Surgery Urged In Rheumatic Valve Damage

Medical Tribune Report

DETROIT—Aggressive surgical intervention to repair advanced rheumatic valvular damage in children should be undertaken even if the patient has active rheumatic fever or extreme pulmonary hypertension, an Israeli team urged here.

Stressing the "very high mortality" in the conservative management of youngsters with rheumatic valvular insufficiency, Dr. Joseph B. Borman of Hadassah University Hospital, Jerusalem, reported that encouraging surgical results in a study of 50 children suggest that replacement of one to three valves may be a mandatory life-saving measure.

He spoke at the 2nd International Symposium on Cardiac Surgery at Henry Ford Hospital.

In detailing the findings, Dr. Borman noted that the high incidence of advanced rheumatic valvular damage in children in the the Middle East, India, South America, and Southeast Asia is in "striking contrast" with Western experience where surgery for severe valvular pathology is limited to adults.

"The accelerated course so common in the young in these underdeveloped areas of the world," he added, "is associated with high morbidity and mortality, and characterized by early severe damage of the valvular mechanics, with the hasty onset of cardiac decompensation, cachexia and failure to thrive."

Of the 50 children in the series, 36 had one valve replaced, 13 two valves and one patient three valves. The children were aged five to 16, and mitral insufficiency, isolated or with involvement of other valves, was the indication for surgery in most cases. Twenty-five children had severe pulmonary hypertension, with a mean artery pressure of 40 mm Hg. The team successfully operated on several patients with pulmonary artery systolic pressures up to 160 mm Hg., Dr. Borman reported.

Forty-seven patients (94 per cent) survived surgery, and 38 are "alive and well" at follow-up periods up to eight-and-a-half years. The younger patients have all returned to school, and the older males are at work.

Commenting that the surgical team had felt some initial hesitation about mitral valve replacement in these children, Dr. Borman, who is Professor of Surgery at the university, stressed that 11 patients died before the team adopted its present aggressive approach.

Results 'Rewarding'

As for the presence of rheumatic fever activity, "it is not a contraindication to surgery when congestive heart failure is progressive and there is no response to conservative therapy, including large doses of steroid," the surgeon declared. "We operated nine children with rheumatic activity and all survived surgery." He emphasized that in these patients, the mechanical component is more important than the depression of myocardial function, and "only total correction of the valvular mechanics will permit restoration of myocardial function."

The major side effects were thromboembolic, with three of the nine late deaths related to this complication.

Overall, Dr. Borman concluded, the long-term results have been "more rewarding than those achieved in adults, with a rapid improvement in functional capacity, accompanied by striking hemodynamic improvement, normal physical development and attainment of sexual maturity in the adolescents."

Coauthors were Drs. A. Simcha, C. Merin, A. Schiffman, S. Cotev, M. Gueron, and M. S. Gotsman.

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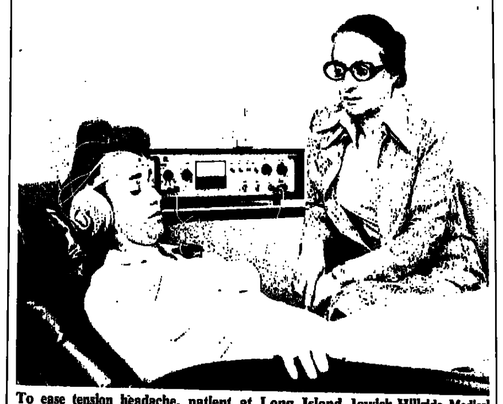
Learning to Relax



To ease tension headache, patient at Long Island Jewish-Hillside Medical Center psychosomatic clinic learns biofeedback techniques from psychologist Lorna Katz, Ph.D. Biofeedback machine emits high tones indicating more tension in forehead muscles or low tones signaling less tension.

Nuclear-Powered Pacemaker Termed Safe and Reliable

Medical Tribune Report

SAN FRANCISCO—Nuclear-powered pacemakers are as safe and reliable, if not more so, than any other type pacemaker developed in the past, surgeons from Newark (N.J.) Beth Israel Medical Center told a meeting here of the American College of Surgeons.

Responding to recent comments by Ralph Nader and others questioning the safety of widespread use of plutonium 238 as a power source, Dr. Victor Parsonnet, director of surgery at Beth Israel, said, "The facts do not support the heated and emotionally charged attacks on the clinical applicability of nuclear pacemakers."

Dr. Parsonnet and his colleagues, Dr. Lawrence Gilbert, director of thoracic surgery, and Dr. I. Richard Zucker, director of cardiodynamics, reviewed worldwide data on plutonium-powered pacemakers.

"Since April 1970, approximately 1400 nuclear pacemakers have been implanted in humans, about a third of them in the U.S.," said Dr. Parsonnet. "There have been no battery failures, very few component failures and no incidents of any kind related to the radioactivity of the implant.

"About 1,226 remain in service in a follow-up period of up to five years," he continued. "This is equivalent to 2,000 patient years of reliable performance." In contrast, the average battery life of non-nuclear pacemakers is about 30 months.

"Those units that are out of service have in general been removed because of death or causes not related to the pacemakers, or for a variety of minor problems common to all other pulse generators," Dr. Parsonnet said. "For the healthy young or middle-aged individual, the nuclear pacemaker should be the unit of choice."

Work at Newark Beth Israel reflects worldwide experience, Dr. Parsonnet reported.

Surgeons there have implanted 64 pacemakers in 62 patients, 38 men and 24 women, with an average age of 50 years, Dr. Parsonnet said. The most frequent indication for pacing was fixed or intermittent complete A-V block. Remaining indications were sick sinus syndrome or tachyarrhythmias.

Fifty-nine of the 64 pacemakers are functioning normally, some up to 24 months after implant, according to Dr. Parsonnet. Five units are out of service. Three pacemakers developed inadequate sensing of intracardiac signal, unrelated to electronic malfunction, and were replaced. One fixed rate unit was replaced when excessive uncontrollable competition developed. And one patient with aortic stenosis died. However, the recovered pacemaker functioned normally.

Few Electronic Problems

"Although there have been no electronic failures in any pacemaker, there have been a few electronic problems," Dr. Parsonnet said. Three units had a gradual drop in rate due to moisture in a resistor in the rate-forming circuit.

Miscellaneous problems also occurred. Three patients developed infections at the implant site; all were successfully managed. The youngest patient, a 14-year-old girl, developed discomfort over the pacer site, necessitating moving the unit to a more comfortable position.

However, "The most troublesome event was the discovery of carcinoma of the contralateral thyroid lobe in a 19-year-old girl 18 months after implantation of a pacemaker unit," Dr. Parsonnet noted. After studying the position of the pacemaker relative to the right thyroid lobe and studying the dose rate emitted by the unit, investigators "have concluded that there was no relationship between the pacemaker implant and the carcinoma," he said. "In all likelihood, the event was coincidental."

Adenocarcinoma Seen Complicating Crohn's Disease

Medical Tribune Report

LAS VEGAS, NEV.—Clinicians who are treating patients with Crohn's disease should keep in mind the possibility that adenocarcinoma may be a complication, a New York investigator cautioned here in a report to the American College of Gastroenterology.

Dr. Charles J. Lightdale, of Memorial Sloan-Kettering Cancer Center, said that case reports of cancer in such patients have increased in the past decade even though the "precise risk" of the complication still cannot be defined.

Citing data from his own center and from the medical literature, Dr. Lightdale pointed out that the incidence of colon cancer in Crohn's colitis is one in 54 cases—a much higher-than-chance association.

Similarly, the incidence of small bowel carcinoma in Crohn's disease of the small intestine is one in 354 cases which he described as "certainly an observed incidence greater than chance."

Four features of carcinoma as a complication of Crohn's disease were listed by Dr. Lightdale:

It occurs at a younger age on the average than does de novo cancer; occurs in the location of inflammatory disease rather than in the usual distribution of the cancer; is associated with a long-standing history of diarrhea; and shows a possible increased incidence in patients with regional enteritis who have undergone surgical bypass of diseased bowel.

Vitamin E Said to Enhance Resistance to Air Pollutants

By MICHAEL HERRING
Medical Tribune Staff

CHICAGO—Vitamin E can prevent the loss of the polyunsaturated fatty acids such as linoleic acid from the lung lining of animals exposed to ozone or nitrogen oxide, according to recent laboratory experiments.

In experiments with human red cells, a supplement of up to 200 mg of vitamin E acetate also produced "much greater resistance to cellular damage" (i.e., Heinz bodies) produced from exposure to fatty acid ozonides.

Based on these findings, Dr. Daniel B. Menzel of Duke University Medical School in Durham, N.C., recommended a daily vitamin E supplementation of up to 200 mg of d,1-alpha-tocopheryl acetate, Dr. Menzel, who is Director of Pharmacology in the Departments of Physiology and Pharmacology and of Medicine at Duke, presented his report to the Vitamin Information Bureau Seminar, held here recently.

In studying vitamin E and air pollution, Dr. Menzel exposed rats to ozone and nitrogen dioxide (two by-products of engine fumes). "Animals deficient in vitamin E died on an average 11.1 days after exposure to one ppm of ozone, while vitamin E supplemented animals died at 17 days," he said. Deficient animals exposed to 33 ppm nitrogen dioxide died after 8.2 days; supplemented animals averaged 18.5 days, he added.

Pathologic Conditions

He attributed these results to the vitamin's ability to interfere with the "autocatalytic autoxidation," caused by pollutants, of natural unsaturated fatty acids in the lungs.

On the cellular level, lipid peroxidation, caused primarily by ozone, can cause cell membranes to become more viscous, Dr. Menzel said. "These changes can be manifest in such pathologic conditions as emphysema in the lung or neoplasia in other tissues." Vitamin E, his data suggested, would act to inhibit the cellular process as well.

In human studies, 11 patients were given diets containing 9 mg tocopherols per day (1974 R.D.A.). Their red blood cells were then tested for resistance to ozonides. The appearance of Heinz bodies, Dr. Menzel explained, indicated degree of damage. After one week of supplementation with 100 mg of vitamin E, however, their resistance to damage was greatly increased, he said, and continued to improve on dosages up to 200 mg vitamin E per day.

"The present dietary intake of vitamin E is inadequate to provide maximal protection against ozonides," Dr. Menzel warned.

Dr. Menzel also mentioned possible benefits of vitamin E supplementation in pulmonary hypertension, vascular disease, pulmonary embolism, and disseminating vascular coagulation.

Antithrombic Agent

▶ In a related report at the same meeting, M. K. Horwitt, Ph.D., Professor of Biochemistry at St. Louis University School of Medicine, presented evidence "for supporting the use of vitamin E as an antithrombic agent," and suggested that as much as 800 I.U. daily would be "perfectly safe." As an antithrombotic, he said, the vitamin may prove better than aspirin.

Citing studies of his own and others involving both animals and humans, Dr. Horwitt also urged more research into the effects of ingesting the various components of the E vitamin, a re-evaluation of the R.D.A. for vitamin E, and a reinvestigation of the "clinical and biochemical aspects of vitamin E . . . in terms of the effects of the oxidation products of alpha-tocopherol."

The main oxidation product of d-alpha-tocopherol, Dr. Horwitt explained, is d-alpha-tocopheryl-quinone, which has anti-vitamin-K activity and decreases the rate of blood clotting.

He cited a Swedish study of nine male myocardial infarction patients, in whom "an apparent prolongation of plasma clotting time started after six weeks of treatment" with 300 mg d,l alpha-tocopheryl acetate. While similar results at such low dosage levels have been difficult to reproduce, Dr. Horwitt said, "support for the reports from Sweden have recently appeared from a coagulation research group in this country."

In a patient receiving warfarin and clofibrate therapy, vitamin E supplementation depressed the vitamin K-dependent coagulation factors, prolonging prothrombin time, the group found. "There was a drop in prothrombin time when the vitamin E ingestion was stopped for seven days," Dr. Horwitt added.

Experiments in rats underscored these findings, he reported. Animals given warfarin showed potentiation of its anticoagulant effect when given supplements of vitamin A, D, and E, he said.

As a result of these and other studies, Dr. Horwitt also recommended a decrease in dosage of therapeutic anticoagulants if vitamin E is also given, or vice-versa, and "where large amounts of tocopherols are considered necessary for their antioxidant effects during pregnancy, a supplement of vitamin K might be indicated."

As an antithrombic agent, "tocopheryiquinone, slowly released from vitamin E, may be more desirable than aspirin and offer a physiological means of decreasing the formation of undesirable blood clots," he said.

Reconsider R.D.A.

He also suggested that the R.D.A. for vitamin E be reconsidered in the light of findings that in minor vitamin E deficiencies for a prolonged period of time, erythrocyte turnover is 8 to 10 per cent faster than normal and is not usually clinically detectable.

If this is true for blood cells, Dr. Horwitt asked, what about other cells in the body that are not so easily tested? Without sufficient vitamin E, the body may not be getting enough antioxidant to protect its phospholipids, he suggested.

He also noted that vitamin E is lost in freezer storage through the action of hydroperoxides, and again urged increased supplementation of the vitamin, since toxicity is as yet unreported.

Anniversary Roses

The world's longest surviving heart transplant patient, Mrs. Betty Anick, of West Allis, Wis., admires roses she received to mark the seventh anniversary of her operation.

Pulmonary Dysfunction Risk Increased in Cosmetologists

Medical Tribune Report

ANAHEIM, CALIF.—Female cosmetologists exposed to aerosol hairsprays are at increased risk of developing pulmonary dysfunctions, according to an investigator from the National Institute for Occupational Safety and Health.

Alan Palmer, Ph.D., told a meeting here of the American College of Chest Physicians that a controlled study of 262 student cosmetologists and 213 graduate cosmetologists in Utah revealed that practicing cosmetologists have a greater chance of developing chronic respiratory disease and atypical sputum cytology which may progress toward more severe changes.

"The thesaurosis sarcoidosis syndrome was demonstrated in 22.5 per cent of the graduate cosmetologists, 12 per cent of students and 14 per cent of controls," Dr. Palmer said.

"Time in the industry is an important variable in the development of respiratory disease, graduate cosmetologists showing more dysfunction than students."

Symptoms in 84 %

Symptoms correlating with aerosol use, including wheezing, sputum, cough, and phlegm production, were reported by 84 per cent of practicing cosmetologists, 13 per cent of students, and only 3 per cent of controls, Dr. Palmer reported.

Cosmetologists working in small salons showed increased prevalence of chronic respiratory disease and atypical sputum. Dr. Palmer attributes this to the marginal ventilation systems of small salons.

index

CLINICAL NEWS NOTE: *"Clinical improvement [in CMV disease] became evident within seven to nine days after the start of TF [transfer factor] therapy. The first sign was the patient's loss of diarrhea, then the rhinorrhea abated, and she began gradually regaining her muscle mass."* (Dr. J. Kelly Smith. See p. 1.)

feature index

Medical Tribune

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Sculpture for the Blind

In Washington's Hirshhorn Museum, Betty Ford unveils five-foot high copy of Alexander Calder stabile, "Flamingo." Replica was made for the blind to enable them to experience a sense of the original 53-foot sculpture in Chicago.

Surgery, Radical Radiation Up Survival in Breast Cancer

By MICHAEL HERRING
Medical Tribune Staff

SAN FRANCISCO—Limited surgery followed by radical radiation in a select group of 85 female breast-cancer patients at Massachusetts General Hospital has yielded a five-year survival rate of 83 per cent in Stage I and 76 per cent in Stage II disease.

In a retrospective study of these patients from 1956 through 1974, Dr. Ann M. Chu, assistant radiotherapist at the hospital, told the American Society of Therapeutic Radiologists here that the results so far "show little difference between the conservative approach and radical surgery."

Selection of patients, she noted, was based on findings of a relatively small tumor, less than three cm, for which tumorectomy would not produce deformity of the breast. Of the 91 breasts involved, three underwent incisional biopsy, 65 excisional biopsy, and 23 quadrantectomy, Dr. Chu said.

After surgery, patients received radiation to peripheral lymphatics and residual breasts. Before 1972, Dr. Chu noted, patients in the series received postoperative radiation in two courses with a two-week rest interval, and often on different equipment.

"Radiation to the . . . supraclavicular region and in most instances the axilla and internal mammary nodes was usually given 4,500 Roentgens (4,208 rads) skin dose in 15 fractions treating 5 times a week," she said. "Radiation to the residual breast itself could arbitrarily be divided into orthovoltage [67 breasts in the series] and supervoltage [24 breasts]."

Dr. Chu also stated that no boost to involved areas was used before 1972. However, since the advent of the electron beam late in 1971 and the afterloading Iridium^{192} interstitial technique in early 1973, a boost of 2,000 to 3,000 rads tumor dose has been delivered to the area of residual disease or surgical site.

55 Stage II Patients

There were 30 patients in Stage I and 55 in Stage II cancer. Patients ranged in age from 33 to 81 years, Dr. Chu said, and many suffered concomitant disorders, including thyroid abnormalities (16 per cent), severe cardiac disease (two patients), polycythemia, ulcerative colitis, polyneuropathy, and monostatic Paget's disease. More than 15 per cent in the series had bilateral breast cancer, Dr. Chu found.

"We obtained an overall local recurrence of 17.3 per cent (14 out of 81 breasts)," she reported. "Six of 14 (42.9 per cent) local recurrences were associated with distant metastases.

"Some of the local recurrences might have been circumvented if a boost dose either with afterload interstitial Iridium^{192} implant or electron beam were given to the site of surgical extirpation or residual tumor," she added.

In an interview with MEDICAL TRIBUNE, Dr. Chu said, "There are so many ways of treating, so many stages, and so many parameters to be considered in the treatment of breast cancer itself that it's very difficult to say what the optimum treatment is at this point.

"This was a small and a very select group of patients, but what they've proven so far is that it's not so much the local disease but the distant metastases that the cancer patient actually succumbs to.

"Therefore, if you're using two different modalities that offer the same local control rate, then you ought to take the more conservative one, the one that gives the better cosmetic result."

Coauthors of the study were Dr. Oliver Cope, Professor Emeritus of Surgery at Harvard Medical School and Massachusetts General, and Robert Risso, assistant physicist.

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*Indications: Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows: "Possibly" effective: For use to relieve pain, in "conditions in which combined sedative and analgesic action is desired, such as, nervous tension and sleeplessness associated with pain or headache." Final classification of the less-than-effective indications requires further investigation.

Contraindications: Hypersensitivity to any of the components.
Precautions: Due to presence of a barbiturate, may be habit forming. Excessive or prolonged use should be avoided.
Side Effects: In rare instances, drowsiness, nausea, constipation, dizziness, and skin rash may occur.
Adult Dosage: One to two tablets or capsules, repeated if necessary up to 6 per day, or as directed by physician.
Before prescribing, see package insert for full product information.
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Testicular Thermography Reveals Undetected Disease

Medical Tribune Report

ATLANTA—Testicular thermography may soon become useful in evaluating intrascrotal disease or unexplained feminization, according to a preliminary report to the American Thermographic Society here.

Dr. Richard H. Gold, Associate Professor and Chief, Mammographic Section, Radiological Sciences, at U.C.L.A.'s Health Science Center, told the society that results of testicular thermograms in 100 males have shown that "both benign and malignant tumors, as well as varicocele and inflammatory processes result in a significant and easily detectable increase in infrared emission compared to the contralateral normal side."

Of special interest, he said, was the finding that, in one patient with metastasizing seminoma, two with feminizing interstitial cell tumor, and one with varicocele resulting in infertility, thermograms were abnormal despite negative physical examinations.

Foil Shields Used

In performing the thermograms, Dr. Gold and his colleagues placed foil shields between scrotum and thighs of the patients and taped the penis to the abdomen. Infrared thermographic images were then made, he said. In normal subjects, scrotal emission averaged 1.4°F. less than that for the thighs, with no more than 1°F. difference between the two testes, Dr. Gold reported.

In three patients with nonpalpable benign or malignant tumors, "the thermograms correctly indicated the abnormal testis, obviating the necessity for bilateral testicular exploratory bivalve procedures, with their attendant hazard of testicular atrophy."

Dr. Gold also noted that one patient with unsuspected varicocele manifested only oligospermia. "His positive thermogram led to exploration and ligation of a clinically undetectable varicocele, following which his wife became pregnant."

In the series, Dr. Gold said, there were one false-positive and three false-negatives. Assisting him were Drs. Richard M. Erlich, Associate Professor of Surgery/Urology, Roy T. Young, Assistant Professor of Medicine, and Barry Samuels, radiology resident, all of U.C.L.A. School of Medicine. Dr. Samuels is now in private practice.

Foil shield isolates testicles from heat of thighs. Penis is taped to abdomen. Gradient at right indicates temperature. Diagnosis: left testicular varicocele.

Higher temperature in left testicle led to a finding of seminoma that would have been missed without thermography, as seminoma was nonpalpable.

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EDITORIAL CAPSULES

. . . brief summaries of editorials or comments in current medical and scientific journals.

Immune System and Cancer

"The malignancies that occur in human beings and experimental animals with immune deficiencies almost exclusively stem from cells within the immune system. Lymphocytic and reticulum cell malignancies account for the great majority of these malignancies. Consequently, we propose that lymphoreticular malignancies develop in patients with immunodeficiency syndromes at a high frequency because of a pertubation within the immune system itself, and not because of a failure of immunosurveillance . . . We find it . . . reasonable to believe that the cell-cell and cell-hormone interactions known to regulate many types of normal as well as malignant cells represent the basic defense against cancer.

"Pertubations in regulatory mechanisms affecting cells of the thyroid, ovary, prostate, mammary glands, and other tissues under appropriate circumstances lead to malignancy, and manipulation of these mechanisms may prevent or control the malignancy . . .

". . . Studies of the factors that regulate . . . lymphoreticular malignancies may in turn increase our understanding of the regulators of the normal immune system." (*Editorial, H.P. Bentley, Jr., M.D., E.R. Hughes, M.D., and R.D.A. Peterson, M.D., J. Pediatr. 87:503, Sept., 1975*)

Iran and Hyaline Membrane

". . . little attention has been paid to the epidemiologic factors and the geographic distribution of hyaline membrane disease . . .

"I have had ample experience with this disease in the United States; however, it has been my conviction . . . that the disease is indeed rare in Iran, and also that there may be real differences in [its] incidence . . . in other parts of the world. . . .

"The overall incidence of hyaline membrane disease in all deliveries in Tehran was 0.27% as compared to 1.2% or above in North America. For infants weighing less than 2,500 gm at birth, the incidence in Iranian newborns was 7.12% as compared to 20% to 35% for North American infants. Further breakdown of these figures for different weight groups and according to the type of delivery (cesarean section or vaginal) showed consistent comparative rarity of this condition in general for Iranian infants regardless of the birth weight.

". . . The reasons for [this] . . . are not clear . . .

"One of our studies so far indicates that the weight of thymus glands of Iranian infants with hyaline membrane disease is significantly higher than that reported for North American newborns. However, contrary to North American reports, no significant correlation has been found between the weights of adrenal glands in affected and nonaffected infants. . . ." (*Editorial, Mohsen Zlal, M.D., South. Med. J. 68:1063, Sept. 1975*).

Effectiveness across the spectrum of most common forms of insomnia

Awake too long, awake too often, awake too early...

These are the most common forms of insomnia, and may occur singly or in any combination. The night of troubled sleep depicted here comprises all three types. As the night progresses from left to right, each sleep stage is identifiable by its own shade of gray. Blue represents "Awake."

As you can see, this hypothetical "patient" takes well over an hour to fall asleep, awakens several times during the middle of the night and awakens too early in the morning.

Sleep Stages

Awake
REM
Stage 1
Stage 2
Stage 3
Stage 4

Awake too long ... Awake too ... the night

Before prescribing Dalmane (flurazepam HCl), please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

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3. Vogel GW: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ
4. Dement WC: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ

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The insomnias most often occurring in young and older adults

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The relative safety of Dalmane (flurazepam HCl) is well documented

Dalmane (flurazepam HCl) is relatively safe and well tolerated; morning "hang-over" has been infrequent. The usual adult dosage is 30 mg; in elderly or debilitated patients, limit initial dosage to 15 mg to preclude oversedation, dizziness or ataxia. Caution patients about possible combined effects with alcohol and other CNS depressants.

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Objectively proved in the sleep research laboratory, Dalmane
- ☐ induces sleep within 17 minutes, on average
- ☐ reduces nighttime awakenings
- ☐ provides 7 to 8 hours of sleep, on average, without repeating dosage

3 Win CIBA Award For Research in Hypertension

Medical Tribune Report

CLEVELAND, OHIO—Three scientists recently received the first CIBA Award for Hypertension Research from the Council for High Blood Pressure Research of the American Heart Association.

The annual award, established in November, 1974, provides a cash prize of $5,000 to the researchers and "recognizes their individual work toward improved treatment or a greater understanding of high blood pressure."

Dr. Lewis K. Dahl, senior scientist of Brookhaven National Laboratory in Upton, N.Y.; Dr. James O. Davis, Professor and Chairman of the Department of Physiology, University of Missouri School of Medicine, Columbia, Mo.; and Dr. Walter Kempner, Professor Emeritus of Medicine, Duke University Medical Center, Durham, N.C., were the recipients.

For 'Meritorious Research'

According to the announcement, the award is granted for work representing "the most important and meritorious research conducted in the field of high blood pressure," a disorder that now affects some 23,000,000 Americans. The Council for High Blood Pressure Research made the formal presentation, including gold medals to Drs. Dahl, Davis, and Kempner at its recent annual meeting, held here.

DR. DAHL

Citations

Dr. Dahl, who is also Professor of Medicine at the Health Sciences Center, State University of New York at Stony Brook, was recognized for "his studies of the role of sodium chloride in Human hypertension and in an experimental animal model in which there are sensitizing, genetic, and renal factors."

Dr. Davis received the award for "his documentation in animal models of the relevance of aldosterone in experimental edemas, and more recently for his studies of factors affecting renin release by the kidneys." Dr. Davis is also recipient of the Lectureship of the International Society of Hypertension and the Outstanding Educator of American Award for 1974.

DR. DAVIS

Dr. Kempner was cited for "his documentation in man" of the value of a rice, low salt diet in controlling some forms of high blood pressure. Dr. Kempner, widely known for his "rice diet," was also recently honored with the establishment of an endowed professorship in his name at Duke University Medical Center.

X-Ray Avoided in Renal Colic in Pregnancy

Medical Tribune World Service

TORONTO—In pregnant patients with suspected renal colic or pyelonephritis, urography can be avoided by following their clinical course for 24 to 48 hours after admission, according to Dr. Mark R. Rigby, senior resident in radiology at the University of Manitoba.

Patients with undiagnosed renal colic respond to analgesics with decreasing pain, and those with pyelonephritis respond to antibiotics with decreasing pain and fever, he told a special residents' session of a meeting of the Canadian Association of Radiologists here.

His conclusions emerged from a study of 22,971 pregnancies between 1969 and 1974 at the Health Sciences Centre, Winnipeg, Man. Dr. Rigby said the study was undertaken to find some way to reduce unnecessary radiation hazards in pregnancy.

He reported that 23 women were given urograms, but that urography proved of diagnostic importance in only three cases. These included one case of urinary calculi (an incidence of one in 2,000 pregnancies) and two of ovarian neoplasm (an incidence of one in 1,000 pregnancies).

In the single case of urinary calculi, Dr. Rigby said, no complications arose from delaying the urogram for about 48 hours after admission. In the patients with pyelonephritis, none of their urograms showed loss of renal cortex or signs attributable to pyelonephritis.

The age range of the patients given urograms was 17 to 37 years. Almost half (11 of 23) of the women were gravida 1 para 0.

Cardiac Fluoroscopy

► A high correlation between the results of cardiac fluoroscopy and coronary heart disease has been shown in a double-blind study of 100 patients at the Montreal Heart Institute.

Dr. Real Thuot, a cardiologist at the institute, told the Canadian Association of Radiologists that coronary calcifications present in 51 patients at fluoroscopy were associated with significant stenosis of 50 per cent or more in 48 of the patients. In addition, he said, there was a concordance of 70 per cent, on the average, between the patterns of contraction of the left ventricle depicted at fluoroscopy and at ventriculogram. Extensive coronary calcifications are accompanied by significant stenosis at the same site in 100 per cent of cases. He indicated that the importance of coronary heart disease increases with the number of coronary artery calcifications.

The 100 patients in the study were nonhypertensives without valvulopathy or cardiomyopathy. They included 87 men and 13 women, with an average of 49.7 years. Each successively underwent a cardiac fluoroscopy, a left ventriculogram and a coronary angiogram.

Stop Smoking Aid

► Radiographs of patients with severe pulmonary disease are being used in a five-day "stop smoking plan" in Saskatoon, Saskatchewan, in which about 420 people have taken part in the past year.

Dr. C. Stuart Houston, of University Hospital, told the Canadian Association of Radiologists that the radiographs seem to provide additional motivation for those who have already expressed a strong wish to quit. Participants attend lectures in one of the Saskatoon hospitals for a total of five evenings. From 20 to 50 people attend each month, he reported.

"There is a definite falloff over time but our results are improving and the last class had 15 of 16 still completely off cigarettes after one month," said Dr. Houston, who quit smoking cigars after 20 years. "They are warned vigorously that, like the alcoholic, a single cigarette usually means the person has fallen off the wagon.

"Radiologists are the central people in patient care and obtain a better overview of disease incidence than other specialists at the hospital," Dr. Houston said. He added, "It is surprising how rarely a smoking doctor takes a smoking history from the patient even where this has likely been a major contributing cause of the disease."

Eosinophilic Pneumonia

► Three cases of eosinophilic pneumonia in which radiography played a key role in diagnosis, enabling rapid clinical improvement, were described by Dr. D. J. Paul, a resident in radiology at Toronto General Hospital.

Dr. Paul suggested maintaining a high index of suspicion for this relatively rare condition, characterized by prolonged pulmonary eosinophilia with asthma, because it has a high morbidity and can be fatal unless treated promptly.

The condition is found most frequently in women, often those with an allergic history, Dr. Paul said. The symptoms are rapidly progressive development of high fever, night sweats, weight loss and marked dyspnoea with wheezing. All patients have an elevated white blood count and most have an elevated blood eosinophilia, he stated.

Radiologically, the chest shows peripheral consolidation without segmental or lobar distribution, Dr. Paul explained. The pattern is a reversal of the bat wing pattern of pulmonary edema.

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Artist's conception of a Cassia acutifolia plant

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Sinequan (doxepin HCl) was similar to the other structurally related psychotherapeutic agents as regards its ability to potentiate norepinephrine response in the animal. However, in the human this effect was not seen. This is in agreement with the low incidence of the side effect of tachycardia seen clinically.

Adverse Reactions. *Anticholinergic Effects:* Dry mouth, blurred vision, and constipation have been reported. They are usually mild, and often subside with continued therapy or reduction of dose.

Central Nervous System Effects: Drowsiness has been observed. This usually occurs early in the course of treatment, and tends to disappear as therapy is continued.

Cardiovascular Effects: Tachycardia and hypotension have been reported infrequently.

Other infrequently reported side effects include extrapyramidal symptoms, gastrointestinal reactions, secretory effects such as increased sweating, weakness, dizziness, fatigue, weight gain, edema, paresthesias, flushing, chills, tinnitus, photophobia, decreased libido, rash, and pruritus.

Dosage. For most patients with illness of mild to moderate severity, a starting dose of 25 mg. t.i.d. is recommended. Dosage may subsequently be increased or decreased at appropriate intervals and according to individual response. The usual optimum dose range is 75 mg./day to 150 mg./day.

In more severely ill patients an initial dose of 50 mg. t.i.d. may be required with subsequent gradual increase to 300 mg./day if necessary. Additional therapeutic effect is rarely to be obtained by exceeding a dose of 300 mg./day.

In patients with very mild symptomatology or emotional symptoms accompanying organic disease, lower doses may suffice. Some of these patients have been controlled on doses as low as 25-50 mg./day.

Although optimal antidepressant response may not be evident for two to three weeks, antianxiety activity is rapidly apparent.

Supply. Sinequan (doxepin HCl) is available as capsules containing doxepin HCl equivalent to 10 mg., 25 mg., 50 mg., and 100 mg. of doxepin in bottles of 100, 1000, and unit-dose packages of 100 (10 x 10's).

More detailed professional information available on request.

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Low HCG Predicts Complications of Early Pregnancy

Medical Tribune World Service

BRATISLAVA, CZECHOSLOVAKIA—Radioimmunoassay of human choriogonadotrophin (HCG) and prolactin (HPL) assist in the diagnosis of complications of early pregnancy, according to Dr. M. Dhont, of the department of gynecology, Ghent University, Ghent, Belgium. He told the International Symposium on Human Reproduction here that, when considered together, abnormally low HCG and HPL estimations showed a predictive value of threatened abortion of 92% in 155 patients with first trimester vaginal bleeding.

HCG levels alone showed a predictive value of 87 per cent in data from 1,200 measurements in the 155 patients, Dr. Dhont said. HPL alone was 72 per cent predictive. HCG level alone was felt to be so useful that it was highly recommended as a routine criterion of how long and when the patient with vaginal bleeding in the first trimester should be hospitalized.

Blood levels of HCG were found to be far more useful than urinary pregnancy tests in 19 proved cases of ectopic pregnancy, the investigator said. HCG tests were clearly positive (greater than 0.05 units/ml) earlier and more reliably. A negative HCG test ruled out the presence of trophoblastic disease, Dr. Dhont said. However, in 17 of the 19 pregnancies later shown to be ectopic, low HCG levels failed to rise as pregnancy progressed, and this was considered to be diagnostic of ectopic pregnancy.

In nine out of ten patients with trophoblastic disease, a diagnostic picture of high HCG and low HPL levels was found.

Pregnancy Diagnosis

► A radioreceptor assay for HCG for early pregnancy diagnosis was described by Dr. M. Talas of the Olomouc (Czechoslovakia) University department of obstetrics and gynecology. The "receptor" preparation was an homogenate of hyperpseudopregnant rat ovaries. Highly significant and reliable increases in titre from less than 0.3 to 2.5 units/ml were seen within nine days of the first missed menstrual period. Within 14 days, levels of above 10 units/ml of plasma were reported.

High Risk Pregnancies

► Drs. A. Fanard, of the Liege University department of gynecology and obstetrics, and E. van Bogaert, of the department of chemical pathology, Free University of Brussels, jointly reported that plasma enzymes were as useful as plasma hormones (HCG, estrogens, progesterone) in diagnosing high risk pregnancies. Confirming earlier work, they showed a tight correlation between threatened abortion and a lack of increase in plasma of oxytocin-splitting enzymes (cysteine amino peptidase) which are produced by the placenta. Moreover, in a double-blind trial they showed that allylestrenol led to highly significant increases in plasma enzyme levels in the course of its successful administration to patients with threatened abortion.

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One Man...and Medicine

ARTHUR M. SACKLER, M.D.,
International Publisher, Medical Tribune

The Great Z.P.G. Copout

IT WAS ABOUT TWO YEARS AGO when I referred to the Zero Population Growth (Z.P.G.) zealots and raised the question as to whether the movement was a social charade or a scientific exercise. What had raised the hackles at that time was the proposal for a $2 billion annual program to curb population growth in the world's poor countries. This appeared in the same *New York Times* carrying the headline story, "12 Million Found Inadequately Fed" in the United States.

In the months that followed I had commented on the vast uninhabited sections of the different continents I had flown over; on the fact that 23 per cent of U.S. land is still covered by commercial forests; that the Australian continent of almost 3 million square miles carries a population of about that of the metropolitan complex around New York City. I had also pointed out the "depopulation" of sections of the U.S. (one-third of our counties lost population between 1960 and 1970), and that 70 per cent of our population was concentrated in less than 2 per cent of our land area. And I noted that a number of countries had already overshot Z.P.G. into negative population growth.

Escape from Problem

The brunt of my thesis was that the population explosion was a diversionary tactic which unfortunately enabled people to escape from a current moral imperative—that of feeding people on earth today instead of wasting energy in generating hot air and overblowing concerns about population in the year 2000.

I say that given the commitment we even now have the skills and the wit to feed all on this planet—now, and in the generation yet to come.

As a nation, our beer consumption alone requires 3 million tons of grain for 4.6 billion gallons of beer. I understand that about a million tons of grain can feed about 5 million people a minimally adequate diet for a year.

As to the delicious marbelized steak which requires up to 8 pounds of grain per pound of beef, I understand the 34 million head of cattle in our feed lots last year munched their way through so many tons of grain and high protein concentrate that a simple 20 per cent shift from grain-fed to grass-fed cattle could have provided enough food to meet the entire 9 million ton famine relief need which was estimated earlier this year at a World Food Conference.

In another column (*Let Us Eat Fish*) I had pointed to the fact that for every pound shift from beef to fish, we could save about 5 pounds of food grain.

Three Important Items

Little did I realize that just in a matter of months three items reported in just one week would make my predictions as to what we can do technically "piker stuff" compared to what was actually in process.

Item: American agronomists and food technologists have come up with new semi-dwarf varieties of soy beans and the yields from this season's experimental crops carried the sensational promise of an increase in 40 per cent—up from 50 to 70 bushels an acre under ordinary field conditions.

Item: Our National Academy of Sciences has reported discovery of a winged bean plant apparently superior dietetically to the soy bean and far superior as a food source since virtually the entire plant—pods, mature seeds or beans, leaves, flowers, shoots and tubers—can be eaten by man and the stalks that remain provide excellent animal feed. In palatability, it is superior also to soy beans, and in terms of acclimatization it provides the advantage of thriving in the humid tropics which the soy bean cannot tolerate. On a dry weight basis, the seeds contain 34 per cent protein and 17 per cent polyunsaturated fats. As a bonus, the roots, which are 20 per cent protein (10 to 20 times the amount available in potatoes and yams) have a bacteria that can turn atmospheric nitrogen into fertilizer, enabling the plant to thrive in poor soil. An added dividend: it can be planted between rows of other crops, helping nourish them.

Item: As though the above were not enough, within the same week came the report of a crop discovery made at a university in Rio de Janeiro that many tropical grasses can fix atmospheric nitrogen through the action of *spirillum* living in close association with their roots. It was found that this action was dependent upon a soil temperature in excess of 25°C. The clues to the fixation of atmospheric nitrogen could lead to a technology which some say can bring about a transformation in agriculture comparable in importance to the already realized "green revolution."

Thank heavens we have been spared a lot of the Z.P.G. rhetoric in recent months. Unfortunately, this is probably the result of the intervention of the real problems—inflation, rising oil and fertilizer prices, unemployment and decline in production—that were taking away food from marginally nourished and starving people—today—under the very noses of the Z.P.G. zealots.

Fortunately, we don't have to always concentrate on bad news—so—without cocktail in hand, without steak and brew, but with a highly chlorinated glass of tap water, may we fervently toast the ingenuity and the skills of man and the realistic replies to the neo-Malthusian doom sayers and diversionary Z.P.G. and the related soothsayers.

Medicine on Stamps

Martin Lister

The above, issued in 1975 as one of several definitive stamps of St. Vincent, a Caribbean island of the Grenadines group, pictures the clam *Tellina Listeri,* named after Martin Lister (1638-1712), outstanding physician and naturalist. After receiving his medical degree from Oxford in 1683, he became a member of the Royal College of Physicians and a physician to Queen Anne.

Text: Dr. Joseph Kler

Stamp: Minkus Publications, Inc., New York

Acupuncture Anesthesia Report Stirs Debate

Continued from page 24

96.5 per cent, although in fact only 18 per cent of patients experienced no pain or only slight pain.

In an interview, Dr. Taub said unequivocally that in his opinion acupuncture is totally valueless in either treatment of disease or pain, where it is always advocated in conjunction with conventional therapy.

Dr. Frederick W. L. Kerr, Professor of Neurosurgery and Neuroanatomy at the Mayo Foundation and Medical School, Rochester, Minn., challenged Dr. Taub's interpretation of the data collected by the 1974 study group of which Dr. Kerr was also a member.

Of 48 cases of surgery using acupuncture anesthesia which members of the group observed, 22 were rated grade I by Western standards, that is, "no pain", and of these 16 were performed without local anesthesia, he said. These included everything from ruptured meniscus of the knee to craniotomy, he went on. Including cases in which slight pain was felt, those rated as satisfactory by the group totalled 35, or 73 per cent, while 27 per cent were clearly failures. These observations were incorporated into a protocol which all members of the group signed, he noted.

Anyone who dismissed acupuncture as "natural surgery" should be asked to undergo upper lobectomy under Western anesthesia and then raise his arms and say "I feel fine," he commented.

Dr. Kerr, who reported on experiments in which evoked response in the subnucleus caudalis of the trigeminal nerve in cats was depressed for as long as 10 minutes by electrical acupuncture using the Chinese "Hoku" point, said, "It's very complex and we're only at the beginning. If we did find out more it might be important for the control of pain."

In an interview with MEDICAL TRIBUNE, Dr. Kerr deplored the emotional atmosphere that has been created in the discussion of acupuncture. "Everyone feels he must take sides," he said. "I have no axe to grind for acupuncture, but I am interested in establishing the facts. If we can't explain why it works, that doesn't necessarily mean anything now. We don't know everything about how Western anesthesia works either."

'Inaccurately Informed'

"I believe Dr. Taub must have been inaccurately informed in China and has transmitted inaccurate data to you," Prof. Luciano Roccia of the Department of Surgery, University of Turino, Italy, told the congress.

He said that it was absolutely false that 200-500 mg of barbiturates are routinely given as premedication in China. In fact, in the majority of cases only 50 mg are administered, he declared, and in many instances no premedication is used. The most important factor about acupuncture, he continued, is that it is applicable to only 15-20 per cent of cases, and in those cases the Chinese figure of 85-90 per cent success can be accepted.

Dr. Roccia said that his comments were based on three trips to China, including a month spent in hospitals in Peking and Shanghai, and on the facts that he had personally performed 500 operations in Europe using acupuncture anesthesia with success, that he had spent eight years conducting experimental and clinical research in the field, and that more than 100 patients are treated with acupuncture every day in the pain clinic which he heads in Turino.

In surgery, he explained, "our criterion of success, considering such parameters as blood pressure, pulse rate, EEG, etc., is based mostly on the declaration of the patients who say that they would undergo acupuncture analgesia again if necessary, and many of them had had surgery under narcosis previously."

He said that in clinical tests he had succeeded in suppressing the nociceptive component of the trigeminal facial reflex in the electromyogram in man, and that he had repeated Chinese cross circulation experiments in animals "proving the production of a humoral analgesic factor under acupuncture."

Acupuncture anesthesia cannot compete with modern technology and pharmacology, he said, "and we cannot suggest to our patients a form of analgesia which has a success rate of 80-90 per cent at best." However, he added, "I personally feel that acupuncture can be of great assistance when combined with modern medicine, not only in anesthesiology but especially in pain therapy."

Prof. Roccia told MEDICAL TRIBUNE that he considers acupuncture anesthesia suited to ENT, maxillofacial, gynecologic and small abdominal surgery. He gives 50-100 mg of meperidine, in some cases combined with local anesthesia. This is usually necessary in abdominal surgery but never in surgery confined to the neck, he said.

IPPB of Little Benefit, Potentially Harmful

Continued from page 1

contaminated ventilators, it would seem that the technique should generally be eliminated in postoperative care," Dr. Browner added.

Now a resident in orthopedic surgery, Dr. Browner performed the studies with Dr. Samuel R. Powers, Jr., chairman of the department of surgery during a fellowship in trauma. Earlier clinical studies by others—in 1960, 1961, and 1969—had indicated that IPPB was of little if any benefit in postsurgical patients, Dr. Browner noted. He and Dr. Powers, therefore, undertook pulmonary function studies to assess the results of IPPB further.

Each of their 13 postoperative patients received 10 minutes of IPPB with 5 cc of normal saline on compressed air to a pressure of 15 cm H_2O. Arterial blood gas determinations were made before and after the IPPB treatment while the patients were breathing room air. Functional residual capacity, measured after arterial samples were drawn, was determined by the nitrogen-washout technique. Predicted functional residual capacity was determined from a standard nomogram based on age, sex, height and weight.

Three patients were found to have a functional residual capacity greater than predicted on the first determination and on this basis were treated as a separate group, Dr. Browner said. Their functional residual capacity all increased, but their arterial pO_2 dropped.

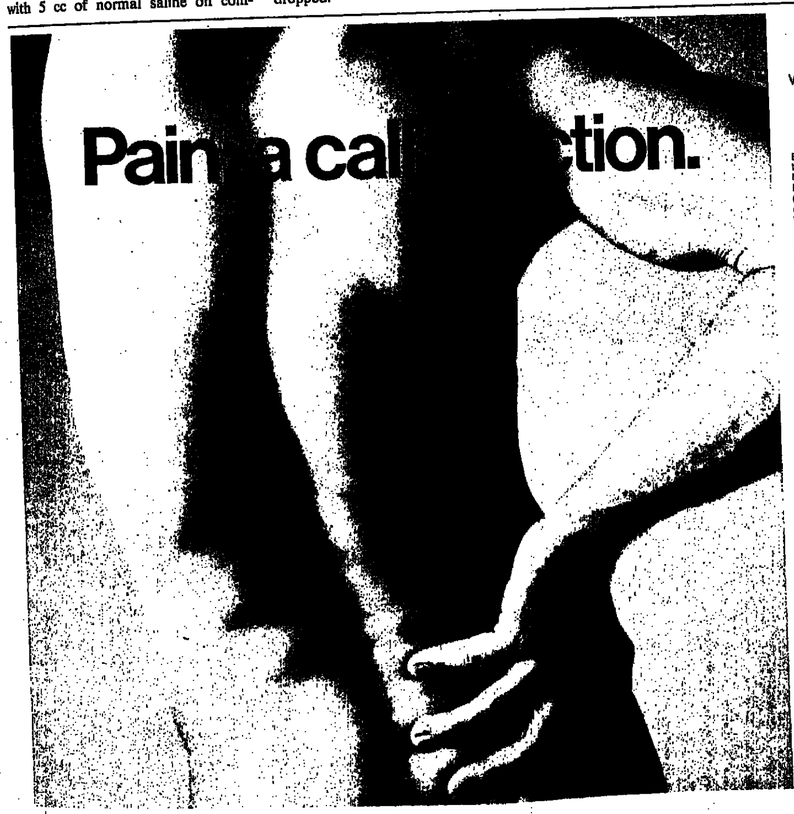
In 10 determinations in nine patients in whom the functional residual capacity was normal or reduced initially, IPPB caused a further decrease. The average fall was 416 cc, representing an overall average drop of 13 per cent. In this same group the pO_2 fell after IPPB in eight of 10 instances from 2.5 to 5.3 mmHg. It increased 1 mmHg and 4 mmHg in two cases.

pO_2 Fall Significant

The fall in pO_2 was significant, Dr. Browner said, though changes in pCO_2 were not. The greater drop in oxygen saturation, he thinks, was due to an average increase in pH of 0.3 pH units, after IPPB, which caused a shift in the oxygen dissociation curve.

IPPB has had two chief uses, Dr. Browner notes. One has been to deliver aerosols in patients with chronic lung disease, the other has been to increase lung volume in postoperative patients to prevent pulmonary atelectasis. Aerosols might be more effectively delivered with hand atomizers, Dr. Browner says. As for the postopcrative use of IPPB, he said he would like to see large, randomized studies comparing IPPB with other techniques such as the "stir-up" regimens that encourage the patient to sit, walk, and change position, and the various types of incentive spirometry that encourage the patient to breathe deeply using bottles and feedback devices.

Dr. Browner added that he thinks the ventilation-perfusion inbalance he and Dr. Powers saw occurs because the oxygen is delivered with IPPB down the path of least resistance in the lungs.



Whenever an APC/narcotic is indicated.

Tablets
Percodan® C

Each yellow, scored tablet contains 4.50 mg. oxycodone HCl (Warning: May be habit forming), 0.38 mg. oxycodone terephthalate (Warning: May be habit forming), 224 mg. aspirin, 160 mg. phenacetin, and 32 mg. caffeine.
INDICATIONS: For the relief of moderately severe pain.
CONTRAINDICATIONS: Hypersensitivity to oxycodone, aspirin, phenacetin or caffeine.
WARNINGS: *Drug Dependence.* Oxycodone can produce drug dependence of the morphine type and, therefore, has the potential for being abused. Psychic dependence, physical dependence and tolerance may develop upon repeated administration of Percodan, and it should be prescribed and administered with the same degree of caution appropriate to the use of other adult narcotic-containing medications. Like other narcotic containing medications, Percodan is subject to the Federal Controlled Substances Act.
Usage in ambulatory patients: Oxycodone may impair the mental and/or physical abilities required for the performance of potentially hazardous tasks such as driving a car or operating machinery. The patient using Percodan should be cautioned accordingly.
Interaction with other central nervous system depressants: Patients receiving other narcotic analgesics, general anesthetics, phenothiazines, other tranquilizers, sedative-hypnotics or other CNS depressants (including alcohol) concomitantly with Percodan may exhibit an additive CNS depression. Where such combined therapy is contemplated, the dose of one or both agents should be reduced.
Usage in pregnancy: Safe use in pregnancy has not been established relative to possible adverse effects on fetal development. Therefore, Percodan should not be used in pregnant women unless, in the judgment of the physician, the potential benefits outweigh the possible hazards.
Usage in children: Percodan should not be administered to children.
Salicylates should be used with caution in the presence of peptic ulcer or coagulation abnormalities.
PRECAUTIONS: *Head injury and increased intracranial pressure:* The respiratory depressant effects of narcotics and their capacity to elevate cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions or a pre-existing increase in intracranial pressure. Furthermore, narcotics produce adverse reactions which may obscure the clinical course of patients with head injuries.
Acute abdominal conditions: The administration of Percodan or other narcotics may obscure the diagnosis or clinical course in patients with acute abdominal conditions.
Special risk patients: Percodan should be given with caution to certain patients such as the elderly or debilitated, and those with severe impairment of hepatic or renal function, hypothyroidism, Addison's disease, and prostatic hypertrophy or urethral stricture.
Phenacetin has been reported to damage the kidneys when taken in excessive amounts for a long time.
ADVERSE REACTIONS: The most frequently observed adverse reactions include light-headedness, dizziness, sedation, nausea and vomiting. Some of these adverse reactions may be alleviated if the patient lies down.
Other adverse reactions include euphoria, dysphoria, constipation and pruritus.
DOSAGE AND ADMINISTRATION: Dosage should be adjusted according to the severity of the pain and the response of the patient. It may sometimes be necessary to exceed the usual dosage recommended below in cases of especially severe pain as in those patients who have become tolerant to the analgesic effect of narcotics. The usual adult dose is one tablet every six hours as needed for pain.
DRUG INTERACTIONS: The CNS depressant effects of Percodan may be additive with those of other CNS depressants. See WARNINGS.
Aspirin may enhance the effect of anticoagulants and inhibit the effect of uricosuric agents.
MANAGEMENT OF OVERDOSAGE: *Signs and Symptoms:* Serious overdose with Percodan is characterized by respiratory depression, extreme somnolence progressing to stupor or coma, skeletal muscle flaccidity, cold and clammy skin, and sometimes bradycardia and hypotension. In severe overdosage, apnea, circulatory collapse, cardiac arrest and death may occur. The ingestion of very large amounts of Percodan may, in addition, result in acute salicylate intoxication.
Treatment: Primary attention should be given to the reestablishment of adequate respiratory exchange through provision of a patent airway and the institution of assisted or controlled ventilation. The narcotic antagonists nalorphine, nalbuphine or levallorphan are specific antidotes against respiratory depression which may result from overdosage or unusual sensitivity to narcotics, including Percodan. Therefore, an appropriate dose of one of these antagonists should be administered, preferably by the intravenous route, simultaneously with efforts at respiratory resuscitation. Since the duration of action of oxycodone may exceed that of the antagonist, the patient should be kept under continued surveillance and repeated doses of the antagonist should be administered as needed to maintain adequate respiration.
An antagonist should not be administered in the absence of clinically significant respiratory or cardiovascular depression.
Oxygen, intravenous fluids, vasopressors and other supportive measures should be employed as indicated.
Gastric emptying may be useful in removing unabsorbed drug.

- ☐ rapid acting
- ☐ effective, reliable oral analgesia in moderate to moderately severe pain
- ☐ oxycodone, the principal ingredient of Percodan, is one of the more readily absorbed oral narcotic analgesics
- ☐ one tablet q.6 h.*

Tablets
Percodan® C

Each yellow, scored tablet contains 4.50 mg. oxycodone HCl (Warning: May be habit forming), 0.38 mg. oxycodone terephthalate (Warning: May be habit form.ng), 224 mg. aspirin, 160 mg. phenacetin, and 32 mg. caffeine.

See facing page for Brief Summary

*See dosage and administration section of Brief Summary

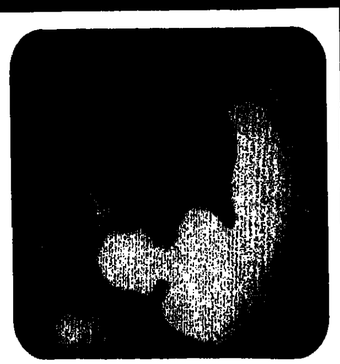
Whenever an APC/narcotic is indicated.

EN 6581

Endo Laboratories, Inc.
Subsidiary of E.I. du Pont de Nemours & Co. (Inc.)
Garden City, N.Y. 11530

The Upper Functional G.I. Disorder

The Pseudo-ulcer



Ulcer-like symptoms: no G.I. pathology

The patient is convinced it's an ulcer. However, symptoms are not quite typical, and x-ray findings are negative. These findings and the results of additional diagnostic procedures exclude an organic basis for the patient's complaints. A diagnosis of "upper functional gastrointestinal disorder" is made, which is supported by the fact that episodes of painful symptoms coincide with episodes of excessive anxiety, as indicated by the history.

It may be useful to explain to the patient the mechanism by which emotions upset normal G.I. functioning, resulting in hypersecretion and hypermotility and thus causing such symptoms as nausea and epigastric pain. In upper functional gastrointestinal disorders, counseling by the primary physician can often help the patient to understand how excessive anxiety may cause flare-ups of G.I. symptoms.

A disproportionate number of patients seen by the general practitioner suffer from functional disorders, as do more than half of those seen by the gastroenterologist.* Where milder cases may respond to counseling alone, if symptoms are severe and disabling to any degree, a suitable regimen may include medication to reduce the symptoms and the excessive anxiety that often provokes these distressing symptoms.

In these cases, Librax as an adjunct can greatly contribute to the course of therapy. Its dual action can offer relief of both painful symptoms and excessive anxiety, because each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br. The antianxiety action of Librium® (chlordiazepoxide HCl) makes Librax exceptional among drugs for certain gastrointestinal disorders associated with excessive anxiety; the clidinium bromide (Quarzan®.™.) component furnishes dependable antisecretory-antispasmodic action. Dosage is flexible; it may be adjusted according to your patient's requirements within the range of 1 or 2 capsules three or four times daily, up to 8 capsules daily in divided doses.

An adjunct
in anxiety-related upper
functional G.I. disorders

Librax®

Each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br.

*Rome HP, Brannick TL: Orientation and mechanism of functional disorders: clinicophysiologic correlation, chap. 133, in *Gastroenterology*, edited by Bockus HL. Philadelphia, WB Saunders Company, 1965, p. 1116

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Symptomatic relief of hypersecretion, hypermotility and anxiety and tension states associated with organic or functional gastrointestinal disorders; and as adjunctive therapy in the management of peptic ulcer, gastritis, duodenitis, irritable bowel syndrome, spastic colitis, and mild ulcerative colitis.

Contraindications: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Clinical Trials

By Oldden

Is Criticism of Medicine A Valid Public Media Role?

Continued from page 14

"I wonder if perhaps we've been worrying too excessively about the news media," Dr. Brody observed at one point, "considering the effect medical television shows seem to have. The only one *I* watch is M.A.S.H.," he said amid shouts of laughter. "It's a pretty accurate picture of how we behaved."

However, the concensus was that not all TV material could be so kindly described.

Said Dr. Thomas, "The television and radio industry, no small part of the national economy, feeds on health, or more precisely on disease, for a large part of its sustenance—not just the primarily medical dramas and the illness or surgical episodes threaded through many of the non-medical stories, in which the central human dilemma is illness. Almost all the commercial announcements, in an average evening, are pitched for items to restore failed health: things for stomach gas, constipation, headaches, nervousness, sleeplessness or sleepiness, arthritis, anemia, disquiet, and the despair of malodorousness, sweat, yellowed teeth, dandruff, furuncles, piles.

Misleading Commercials

"The food industry plays the role of surrogate physician, advertising breakfast cereals as though they were tonics, vitamins, restoratives; they are now out-hawked by the specialized health-food industry itself, with its non-polluted, organic 'naturally' vitalizing products. Chewing gum is sold as a tooth cleanser. Vitamins have taken the place of prayer."

Dr. Alfred Gellhorn, vice-president, The City College of New York, cited a report which indicated that 70 per cent of health information on TV is from commercials, 80 per cent of which is inaccurate or misleading.

Dr. Gellhorn also confessed to being rather embarrassed to admit he'd never seen a TV doctor show. However, as part of preparing for the meeting he had made a point of watching *Marcus Welby, M.D.*

"I believe you can probably relate Marcus Welby and similar shows to the rise in malpractice claims," he said. "Every week Marcus Welby or someone like him, performs a miracle. This leads to the expectation of miracles: If you go to the right doctor, you'll be cured."

Injecting a philosophical element into the discussion, Berton Roueché of *The New Yorker*, noted: "We are living in a time of instant gratification. There is an impatience with inconvenience and a demand for magic shortcuts.

"I think that the two forces represented here today—medicine and medical journalism—are primarily to blame. Millions of ordinary Americans believe in an omnipotent American medicine, an American pharmacology, that has a cure for everything.

"This irrational trust can turn, if unfulfilled, into an irrational mistrust. The expectation, rather than the hope, of a cure is more than merely unreasonable. Disillution itself is a danger," Mr. Roueché warned.

Victim of Success

Calling medicine a "victim of its own success," he urged a revolution in thinking, leading to "an acceptance of the naturalness of disease, an acceptance of the inevitable limitations of medicine, and an acceptance of the one real certainty that life is a fatal disease."

Similar thoughts had occurred to Dr. Thomas: "As a people, we have become obsessed with health. There is something fundamentally, radically unhealthy about all this. We do not seem to be seeking more exuberance in living, as much as staving off failure, putting off dying. We have lost all confidence in the human body.

"We are being taken in by the propaganda, and it is not only bad for the spirit of society, it will make any health care system, no matter how large and efficient, unworkable. If people are educated to believe that they are fundamentally fragile, always on the verge of mortal disease, perpetually in need of support by health care professionals at every side, always dependent on an imagined discipline of 'preventive' medicine, there can be no limit to the number of doctors' offices, clinics and hospitals required to meet the demand. In the end, we will all become doctors, spending our days screening each other for disease, a nation of healthy hypochondriacs, living gingerly, worrying ourselves half to death."

Laser Sorts Cancer Cells

Cervical and vaginal cancers have been detected using new laser cell sorting system developed by Los Alamos (N.M.) Scientific Laboratory's Biophysics and Instrumentation group. Garry Salzman, Ph.D., demonstrates.

New System of Dental Care, Using Artificial Saliva, May Eliminate Decay

Medical Tribune Report

SAN FRANCISCO—A new system of dental care may eliminate tooth decay altogether, says a team of radiologists and dental researchers from the University of Rochester.

Applied to more than 100 cancer patients in the past two and a half years, the new method not only prevented and stopped decay, but sometimes reversed the process, said Erling Johansen, D.D.S., Ph.D., speaking for Dr. Sidney H. Sobel, Thor O. Olsen, Ph.D., and Dr. Philip Rubin, at a meeting here of the American Society of Therapeutic Radiologists.

The system, primarily a self-treatment procedure, consists of routine care with emphasis on brushing and flossing, application of fluoride preparation, use of artificial saliva to remineralize teeth, and mechanical stimulation of natural salivation.

Cancer patients were used in the study because they often develop rampant caries as radiation therapy of the head and neck region destroys salivary function.

IMMATERIA MEDICA

Three Before Bed

● Dr. Alexander Thomson, director of the Medical Advisory Department of Lederle Laboratories, quotes a sentence in *Family Practice News* which reads: "Routine immunizations should begin at age 2 months with DDT and trivalent oral polio vaccine." DDT is not compatible, he says, with "our Orimune poliovirus vaccine.

● "... a plague will be installed at the clinic." That's how the Ida County (Ia.) *Pioneer Record* described establishment of a clinic by two local philanthropists, according to a clip forwarded by pharmacist Robert G. Clark of Des Moines, Ia.

● Down in Hickory, N.C., Dr. J. Sidney Rice is puzzling over some nice shiny tubes. He had been treating his little granddaughter for a dermatosis using some sample tubes of medication. She carefully read the labels. "On each tube," he says, "in addition to information concerning the contents was the notation: *Peel Off label*, intended for the pharmacist's information." Well, his granddaughter peeled off the labels —and then her shocked mother sent her to Grandpa with nice shiny tubes.

One of Dr. Rice's patients told him recently that her mother was having surgery to put a "cartridge" in her leg. So if you hear of a new specialty—bang specialty—don't be surprised.

Clinical Cliché

The child was studied in his basic state.

SANOREX®
(MAZINDOL)©

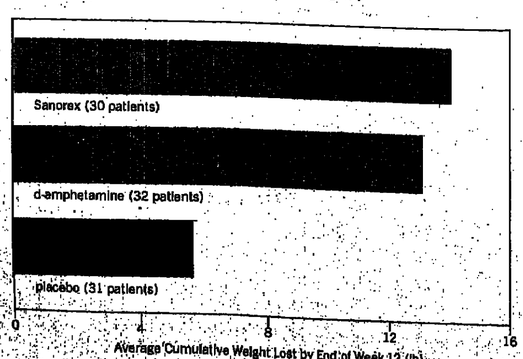
TABLETS, 1 mg and 2 mg

PUNCTURE THIS MYTH

SANOREX IS AS EFFECTIVE AS d-AMPHETAMINE

In a double-blind study[1] of 93 obese patients (all of whom completed the study), 30 patients received Sanorex (1 mg t.i.d.), 31 received placebo, and 32 received d-amphetamine (5 mg t.i.d.).

During the 12-week phase of active medication, patients on Sanorex lost an average of 14.1 lb, compared with 13.1 lb for d-amphetamine patients and 5.6 lb for placebo patients. Throughout the active medication phase, 63% of patients on Sanorex lost more than 1 lb/wk, compared with 38% of the d-amphetamine group and 29% of the placebo group.



SANOREX IS THE ONLY PRESCRIPTION ANOREXIANT NOT CHEMICALLY RELATED TO THE AMPHETAMINES

Although the pharmacologic activity of Sanorex and that of amphetamines are similar in many ways (including central nervous system stimulation in humans and animals, as well as production of stereotyped behavior in animals), animal experiments also suggest that there are differences.*

Different Chemical Structure
Sanorex is chemically unrelated to d-amphetamine—or any other "non-amphetamine" anorexiant available—and cannot be converted into an amphetamine-like substance in a biologic system.

Different Neurochemical Action*
Animal studies suggest that Sanorex, unlike d-amphetamine, does *not* interfere with norepinephrine synthesis.

Action of d-Amphetamine*
In animal studies, d-amphetamine (like food) activates afferent neurons leading to appetite centers in the hypothalamus. Resulting release of norepinephrine activates the receptor neurons. Unlike food, however, d-amphetamine also suppresses norepinephrine synthesis. Thus, increasingly larger doses of d-amphetamine become necessary to produce an effect.

Action of Sanorex*
After intake of food stimulates the release of norepinephrine from afferent neurons, Sanorex blocks its re-uptake without disturbing normal synthesis and release.

Simplicity and Flexibility of Dosage
Simple one-a-day dosage is facilitated by 2-mg tablets (taken one hour before lunch). New flexibility (for the patient in whom 1 mg t.i.d. is preferred) is now facilitated by new 1-mg tablets (taken one hour before meals).

*The significance of these differences for humans is uncertain.

For Brief Summary, please see facing page.

1. Vernace BJ: Practical considerations for managing obese patients: initial interview and effective treatment in the office. Scientific Exhibit presented at the American Medical Association, 27th Clinical Convention, Anaheim, Calif., Dec 1-4, 1973.

SANOREX®
(MAZINDOL)©

Indication: In exogenous obesity, as a short-term (a few weeks) adjunct in a weight-reduction regimen based on caloric restriction. The limited usefulness of agents of this class should be measured against possible risk factors.
Contraindications: Glaucoma; hypersensitivity or idiosyncrasy to the drug; agitated states; history of drug abuse; during, or within 14 days following, administration of monoamine oxidase inhibitors (hypertensive crisis may result).
Warnings: Tolerance to many anorectic drugs may develop within a few weeks; if this occurs, do not exceed recommended dose, but discontinue drug. May impair ability to engage in potentially hazardous activities, such as operating machinery or driving a motor vehicle, and patient should be cautioned accordingly.
Drug Interactions: May decrease the hypotensive effect of guanethidine; patients should be monitored accordingly. May markedly potentiate pressor effect of exogenous catecholamines; if a patient recently taking mazindol must be given pressor amine agents (e.g., levarterenol or isoproterenol) for shock (e.g., from a myocardial infarction), extreme care should be taken in monitoring blood pressure at frequent intervals and initiating pressor therapy with a low initial dose and careful titration.
Drug Dependence: Mazindol shares important pharmacologic properties with amphetamines and related stimulant drugs that have been extensively abused and can produce tolerance and severe psychologic dependence. Manifestations of chronic overdosage or withdrawal with mazindol have not been determined in humans. Abstinence effects have been observed in dogs after abrupt cessation for prolonged periods. There was some self-administration of the drug in monkeys. EEG studies and "liking" scores in human subjects yielded equivocal results. While the abuse potential of mazindol has not been further defined, possibility of dependence should be kept in mind when evaluating the desirability of including the drug in a weight-reduction program.
Usage in Pregnancy: In rats and rabbits an increase in neonatal mortality and a possible increased incidence of rib anomalies in rats were observed at relatively high doses. Although these studies have not indicated important adverse effects, the use of mazindol in pregnancy or in women who may become pregnant requires that potential benefit be weighed against possible hazard to mother and infant.
Usage in Children: Not recommended for use in children under 12 years of age.
Precautions: Insulin requirements in diabetes mellitus may be altered. Smallest amount of mazindol feasible should be prescribed or dispensed at one time to minimize possibility of overdosage. Use cautiously in hypertension, with monitoring of blood pressure; not recommended in severe hypertension or in symptomatic cardiovascular disease including arrhythmias.
Adverse Reactions: Most commonly, dry mouth, tachycardia, constipation, nervousness, and insomnia. *Cardiovascular:* Palpitation, tachycardia. *Central Nervous System:* Overstimulation, restlessness, dizziness, insomnia, dysphoria, tremor, headache, depression, drowsiness, weakness. *Gastrointestinal:* Dryness of mouth, unpleasant taste, diarrhea, constipation, nausea, other gastrointestinal disturbances. *Skin:* Rash, excessive sweating, clammminess. *Endocrine:* Impotence, changes in libido have rarely been observed. *Eye:* Long-term treatment with high doses in dogs resulted in some corneal opacities, reversible on cessation of medication; no such effect has been observed in humans.
Dosage and Administration: 1 mg three times daily, one hour before meals, or 2 mg per day, taken one hour before lunch in a single dose.
How Supplied: Tablets, 1 mg and 2 mg, in packages of 100.
Before prescribing or administering, see package circular for Prescribing Information. 78-97482 SANDOZ
SANDOZ PHARMACEUTICALS, EAST HANOVER, N.J. 07936

TRIBUNE SPORTS REPORT

Abnormal EKGs Found in Apparently Healthy Athletes

Medical Tribune Report

DALLAS, TEXAS—Electrocardiogram abnormalities, normally indicative of heart hypertrophy and ischemic changes, are often seen in apparently healthy athletes, Dr. Sheldon Preschel, medical director of the Savings Banks Life Insurance Fund in New York, told a meeting here of the Association of Life Insurance Medical Directors.

While stressing there is no evidence that exercise is solely responsible for unusual EKG tracings in athletes, Dr. Preschel did point out that athletic training or conditioning is designed to acclimate the individual to greater physical effort by developing compensatory mechanisms to overcome increased physiologic side effects.

Dr. Preschel noted that 50 per cent of all EKG changes involve the ST-T segment, and 25 per cent the T wave alone. Statistically, 1 to 4 per cent of EKGs with T wave changes may not be indicative of heart disease.

T waves are labile, Dr. Preschel explained, and may be affected by exercise, excitement, ventilation, noncardiac and cardiac disease, metabolic disorders, and anatomic derangements.

"Exercise results in an increased heart rate, elevated blood pressure, and increased cardiac output while producing metabolic acidosis, hypercapnia, hypercalcemia, hyperkalemia," he continued. "Blood electrolyte changes promote myocardial irritability, often leading to cardiac arrhythmias."

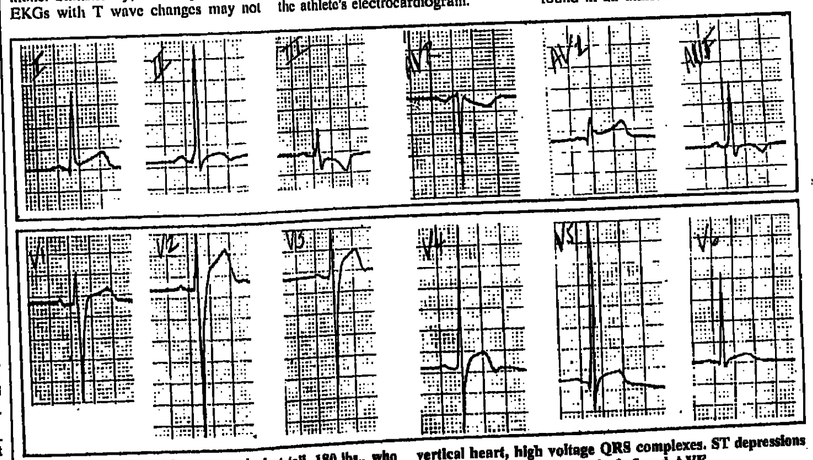
Sinus bradycardia, sinus arrhythmia, first degree, second degree, and Wenckebach type heart blocks, wandering pacemakers, and frequent apical, junctional or ventricular premature contractions, all rhythm disturbances due to dominant vagal control of the sympathetic-parasympathetic mediators of heart rate, will be picked up in the athlete's electrocardiogram.

"In addition, there may be changes in the QRS and ST-T complexes as a manifestation of cardiac muscle hypertrophy, or in the T waves due to repolarization disturbances of the myocardium of the trained athlete."

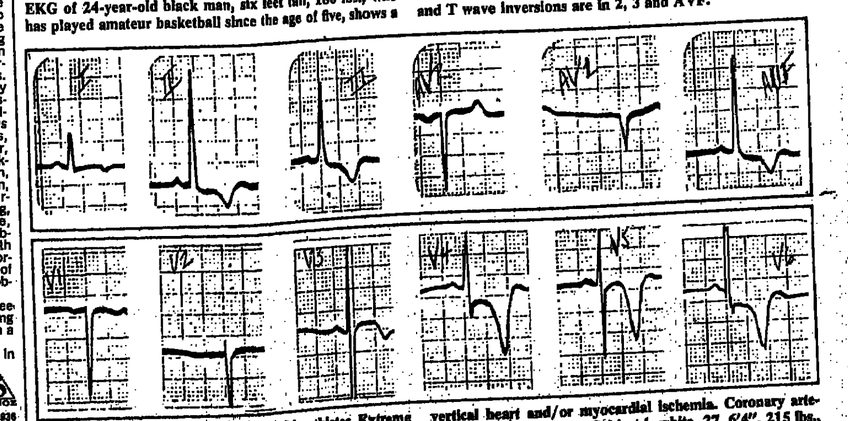
Dr. Preschel also noted that T wave amplitude decreases during exercise and increases as heart rate slows. Well-trained athletes may also exhibit slight elevation of the ST segment. "These ST-T changes may be manifested in the limb and/or precordial leads," he said.

"When exercise exceeds the normal requirement for Master's or maximal treadmill stress tests, there may be a reversion of inverted T waves to the upright state," he added. "As the heart rate slows after such exercise, the T wave may again invert."

Dr. Preschel pointed out that the common juvenile pattern of inverted T waves in V1, V2, V3 and possibly V4, is sometimes found as a normal variant in adult blacks and females. "Since many of our more prominent athletes are black, this may offer a partial explanation for this type of finding in the EKGs of some black athletes," he said, "but it is not the answer for all the electrocardiographic abnormalities found in all athletes."



EKG of 24-year-old black man, six feet tall, 180 lbs., who has played amateur basketball since the age of five, shows a vertical heart, high voltage QRS complexes. ST depressions and T wave inversions are in 2, 3 and AVF.



EKG shows several abnormalities found in athletes. Extreme vertical heart, sinus bradycardia, ST-T changes in 1, 2, 3, AVF, and V2-6 suggest left ventricular hypertrophy in a vertical heart and/or myocardial ischemia. Coronary arteriography was negative. Subject is white, 27, 6'4", 215 lbs., and a professional basketball player.